

M 5.9, Tonga

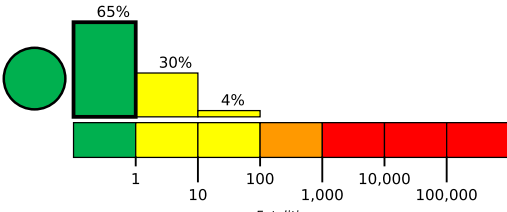
Origin Time: 2023-08-08 18:38:55 UTC (Tue 06:38:55 local)
Location: 15.2513° S 173.1714° W Depth: 58.0 km

PAGER Version 3

Created: 2 hours, 4 minutes after earthquake

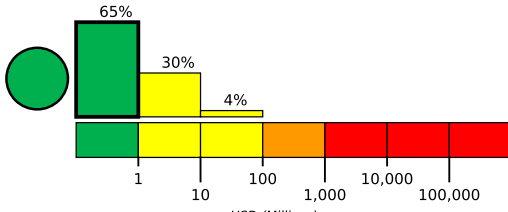
Estimated Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.



Fatalities

Estimated Economic Losses



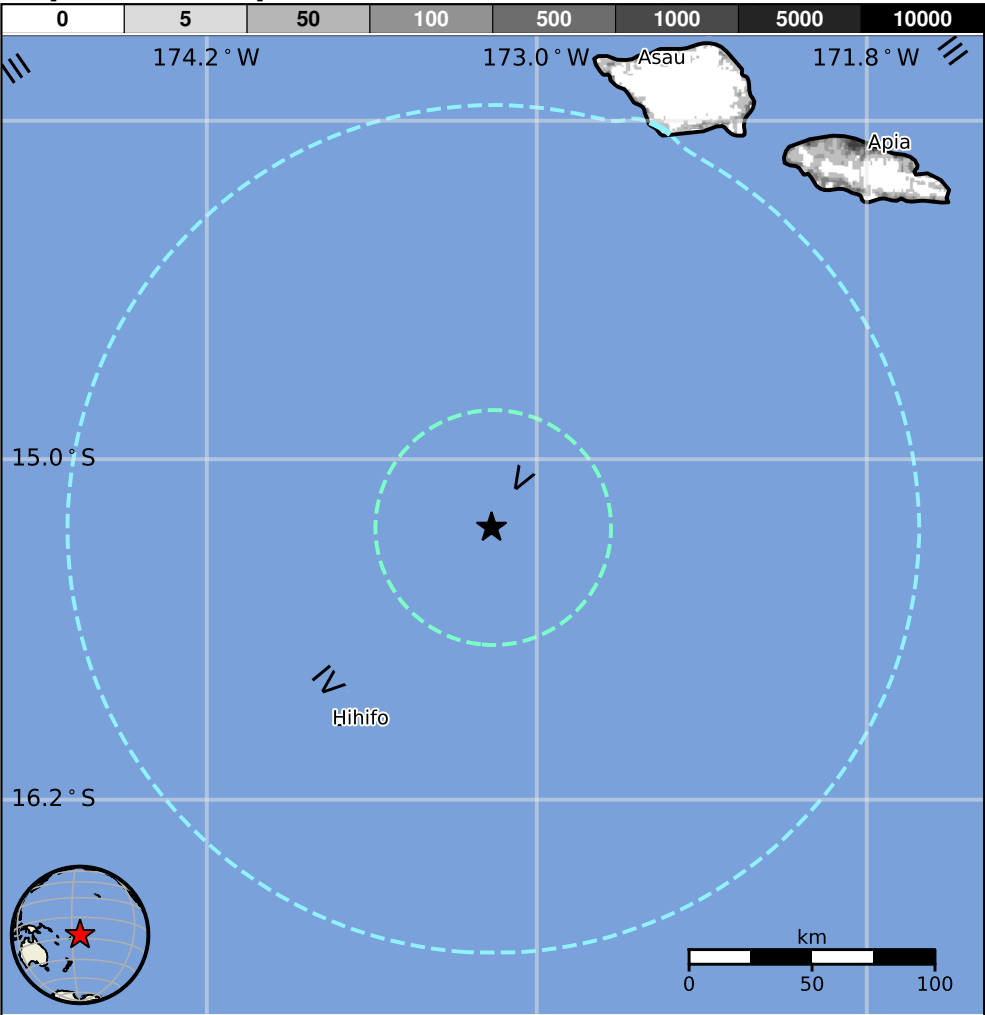
USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		—*	202k*	7k	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are vulnerable to earthquake shaking, though resistant structures exist. The predominant vulnerable building types are informal (metal, timber, GI etc.) and unknown/miscellaneous types construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1987-10-06	321	7.2	IV(19k)	—
1999-01-05	369	5.9	VII(15k)	—
2006-09-28	194	6.9	IV(197k)	0

Selected City Exposure

from GeoNames.org

MMI	City	Population
IV	Hihifo	1k
III	Lotofaga	1k
III	Gataivai	1k
III	Mulifanua	5k
III	Vailoa	1k
III	Nofoali'i	2k
III	Leulumoega	1k
III	Asau	7k
III	A'opo	0
III	Apia	40k
III	Lufilufi	1k

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.
<https://earthquake.usgs.gov/earthquakes/eventpage/us6000kyph#pager>

bold cities appear on map.

(k = x1000)

Event ID: us6000kyph